


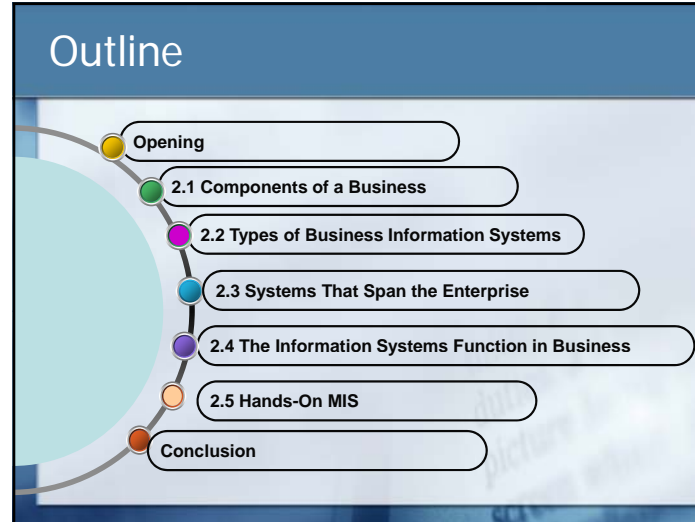
## E-Business: How Business Use Information Systems



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*Instructor : Dr. Don* 2009.03.07

## Outline



- Opening
- 2.1 Components of a Business
- 2.2 Types of Business Information Systems
- 2.3 Systems That Span the Enterprise
- 2.4 The Information Systems Function in Business
- 2.5 Hands-On MIS
- Conclusion

## Heads Up

- Overview of how business firms use MIS
- Brief introduction to entire field for later chapter



## Information Systems Join the Tupperware Party

- **Problem:** Changing business model caused unnecessary difficulty for Tupperware sales consultants.
- **Solutions:** Implement **Web-based order management system** that simplifies order entry and other tasks.

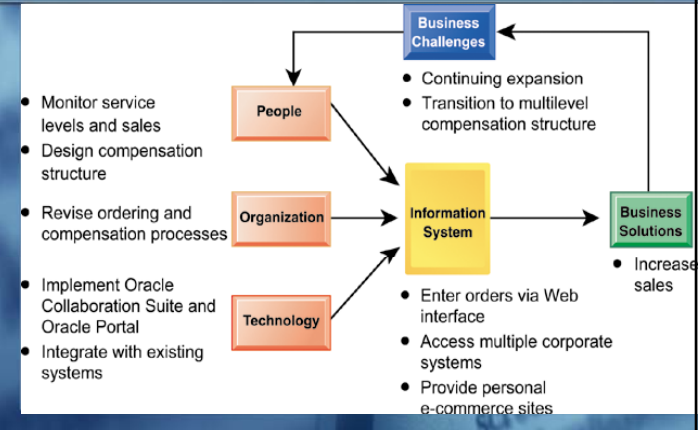


### Information Systems Join the Tupperware Party

- **Oracle Collaboration Suite and Oracle Portal** also streamlines communication and support.
- Demonstrates IT's role in centralizing data, improving production processes, and driving growth and profitability.
- Illustrates the importance of automating business processes to reduce workloads and increase productivity.



### Information Systems Join the Tupperware Party



## 2.1 Components of a Business

- A business is a formal organization whose aim is to produce products or provide services for a profit – that is to sell products at a price greater than the costs of production.

## 2.1 To sell and to buy...

- Business firms transform inputs and resources by adding value to them in the production process.
- Customers are willing to pay this price because they believe a value greater or equal to the sale price.

## Deal!

Customer's  
Perceived Value  $>$  Selling Price

## In Taiwan...

- Small and Medium Enterprises (SME's) all over the world contribute some 50% of GDP in the developed economies and some 60% of total employment (Lloyd-Reason, 2007).
- In 2006, 99.77% of the total enterprises in Taiwan were SME's (MOEA, White Paper on SME's in Taiwan, 2007).

## Business Environment

- Business firms depend heavily on their environments to supply capital, labor, customers, new technology, services and products, stable markets and legal systems and general educational resources.
- Business environments are constant changing: new developments in technology, politics, customer preferences and regulations happen all the time. In general, when business fail, it is often because they failed to respond adequately to changes in their environments.

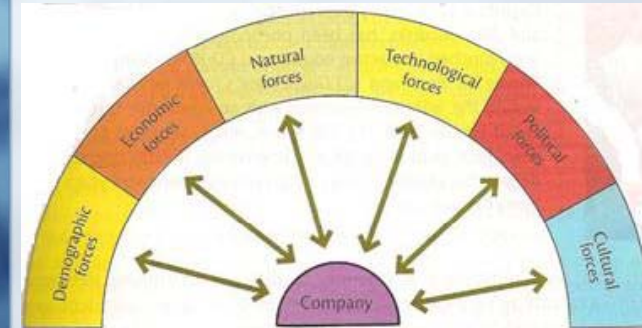
## Marketing Environment

- The microenvironment consists of the factors close to the company that affect its ability to serve its customers.
- The macroenvironment consists of the larger societal forces that affect the microenvironment.

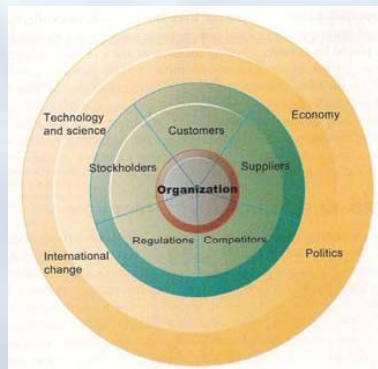
### The Company's Microenvironment



### The Company's Macroenvironment



### To respond to the environment...



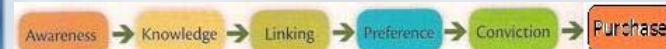
### To respond to the environment...

- To be successful, an organization must constantly monitor and respond to or even anticipate – developments in its environment.
- A firm's environment includes specific groups with which the business must deal directly, such as customers, suppliers and competitors as well as the broader general environment, including socioeconomic trends, political conditions, technological innovations and global events.

## Technological Environment

- The technological environment is perhaps the most dramatic force shaping our future.
- New technology create new markets and opportunities. They replace older technology. Companies that do not keep up will soon find their products outdated and miss new product and market opportunities. Thus, marketers should watch the technology environment closely.

## Buyer-readiness Stages

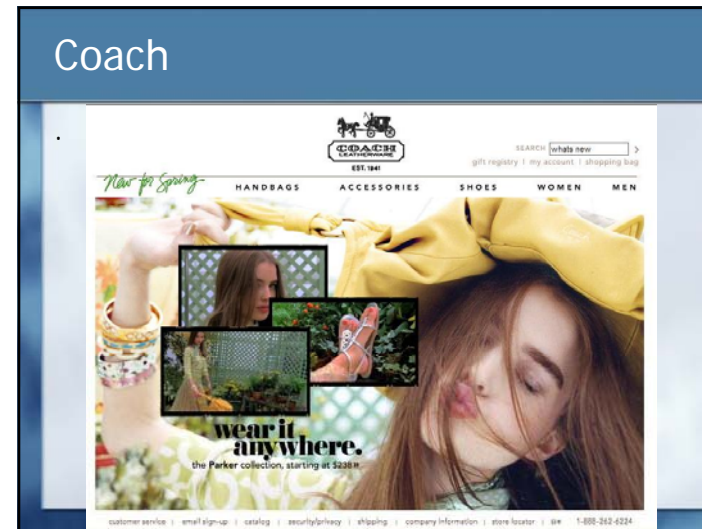


## Corporate Website

- Corporate Website is designed to build customer goodwill and to supplement other channels, rather than to sell the company's products directly to:
  - Provide information
  - Create excitement
  - Build relationships

## Marketing Website

- Marketing Website is designed to engage consumers in interaction that will move them closer to a direct purchase or other marketing outcome.



### The 7 Cs of effective Website design

1. Context
2. Content
3. Community
4. Customization
5. Communication
6. Connection
7. Commerce

### Organizing a business: Basic business functions

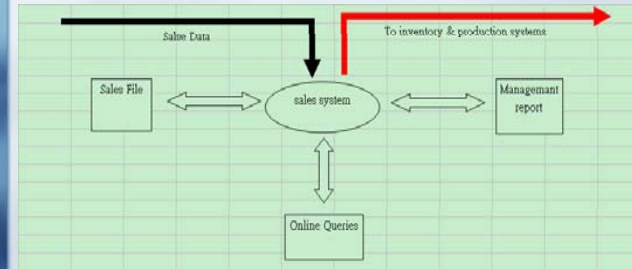
- The decision of what to produce is a strategic choice because be it determines who are your potential customers and what kind of sources of a business firm needs.

## MIS helps organizations to achieve the following objectives:

- To achieve operational excellence (productivity, efficiency, agility)
- To develop new products and services
- To attain customer intimacy and service (continuous marketing, sales and service, customization and personalization)
- To improve decision making (accurate and speed)
- To achieve competitive advantage
- To ensure survival

## Information supports functions

### ■ Sales & Marketing

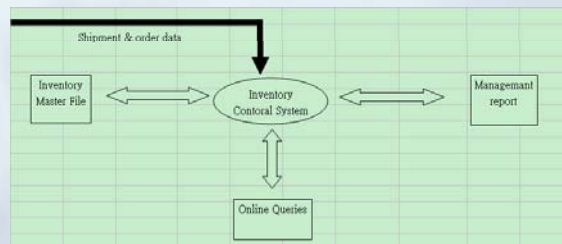


Sales report : Week Ending 2/7/2008

Item	Description	color	Size	Unit Price	Unit Sold	Total Sales
294	Sports bag	Black	Small	\$10	10,451	\$104,510
295	Sports bag	Black	Medium	\$20	21,800	\$436,000
296	Sports bag	Red	Small	\$10	5,331	\$53,310

## Information supports functions

### ■ Manufacturing & Production

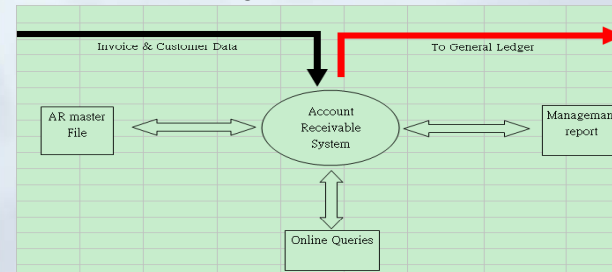


Inventory Status Report  
Date:1/14/2008

Item	Description	Units on hand	Units on order
6361	Fan belt	10,211.00	
4466	Power cord	55,710.00	88,660.00
9313	Condenser	663.00	10,200.00

## Information supports functions

### ■ Finance & Accounting

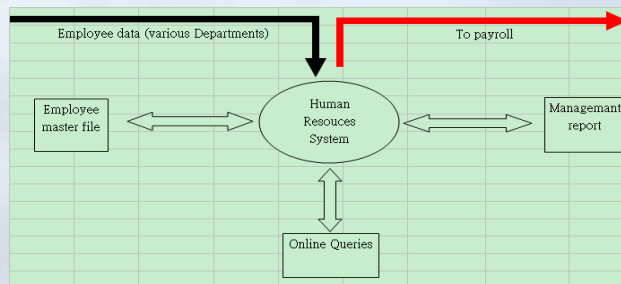


Accounts Receivable Aging Report

Cust. No.	Name	Current Balance	1-30 Days Past Due	1-60 Days Past Due	1-90 Days Past Due	Total
5043	Myers Co.	-	\$500			500.00
6219	IT Garden	\$1,500		\$700		2,200.00
6932	Best Home	\$1,000				\$1,000

## Information supports functions

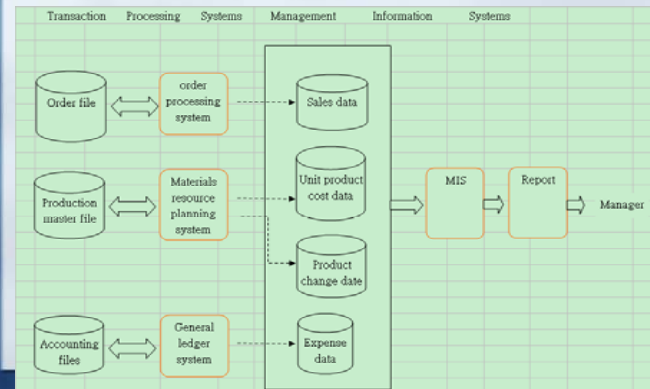
### Human Resources



Termination Report			
Date	Name	Number	Reason
11/12/2007	John Hansen	29,433	Position eliminated
12/1/2007	Patricia Carlye	14,327	Retired
1/12/2008	Ellen Quimby	21,224	Left company

## Information supports functions

### Case study of Google (TPS)



## 2.3 Systems That Span the Enterprise

### Enterprise System

Focus on executing business process across business firm, include all levels of management

- **SCM** (Supply Chain Management )
- **CRM**( Customer Relationship Management)
- **KMS**(Knowledge Management System)

## SCM (Supply Chain Management)

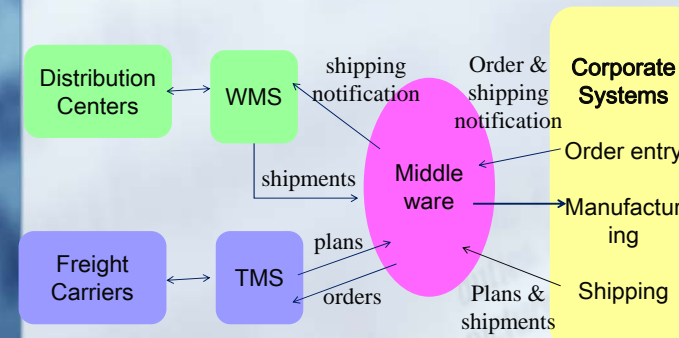
- Provide information to help suppliers, purchasing firms, distributors, and logistics companies share information about order, production , inventory levels, and delivery of products. So that they can share, produce, and deliver goods and services efficiently.

### SCM (Supply Chain Management)

■ (contd)

Get the right amount of product from source to point of consumption with the least amount of time and with the lowest cost.

### SCM (Supply Chain Management)



### CRM (Customer Relationship Management)

■ CRM (Customer Relationship Management)

Manage internal activity to fit customer's demand and improve long term relationship for win-win status.

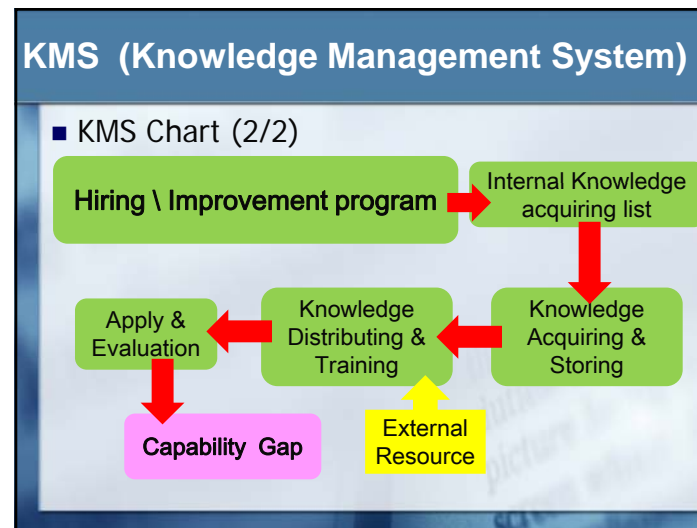
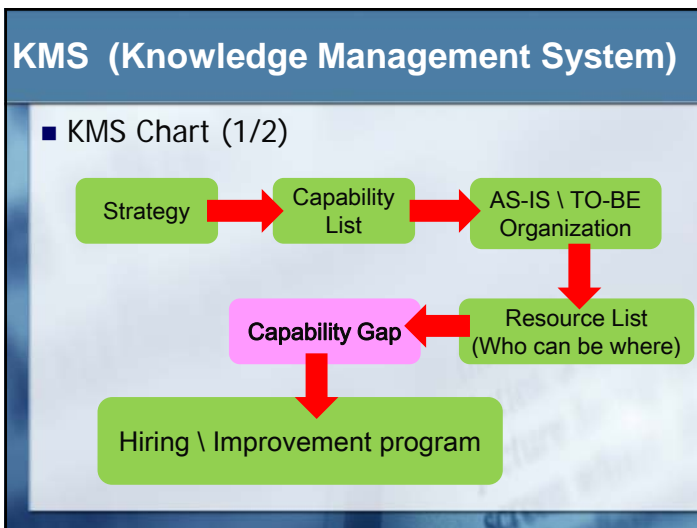
Win-win : our sales target and customer satisfaction

### CRM (Customer Relationship Management)



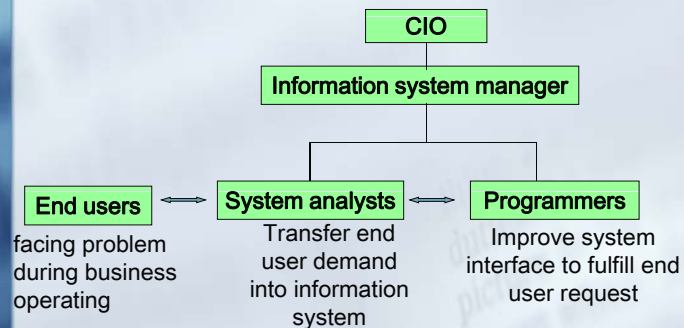


- ### KMS (Knowledge Management System)
- Support Processes for acquiring, storing, distributing, and applying knowledge, as well as processes for creating new knowledge and integrating it into organization.
  - Diminish capability gap between company strategy and existing resource



2.4 The Information System Function in Business

**Information System Department**



2.4 The Information System Function in Business

■ **Information security enforce: CSO & CSIO**

■ **Example:**

Set up Incident Response Procedure.

■ **Comply privacy laws: CPO**

■ **Example:**

Insufficient privacy frame work may damage company business image even will against regional legal rules.

2.4 The Information System Function in Business

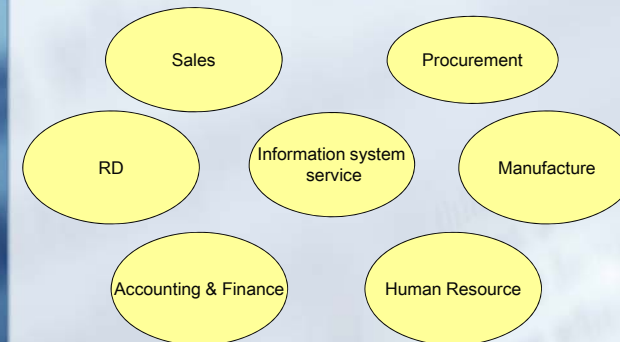
■ **CKO & CSO & CLO – an executive to integrate exit knowledge into enterprise operating process.**

■ **Consulter:** CKO is experienced with strong information background to lead enterprise into correct business tendency.

■ **Executer:** CKO is not an empty talker, in other words, CKO is a role to transfer knowledge into executable process.

2.4 The Information System Function in Business

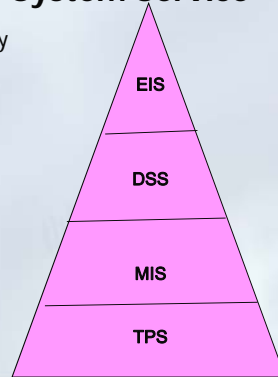
■ **Information System Service.**



## 2.4 The Information System Function in Business

### ■ Management Level for System Service

- Information system provide multiply system to different management level:
- EIS – assist decision maker for business direction
- DSS – assist making business strategic
- MIS – provide management information for each function business unit
- TPS – increase effective solution in manufacture field



## 2.5 Hands-on MIS

- Assignment # 1
- Assignment # 2
- Assignment # 3

## Exercise#1

### ■ Case Description:

Role Definition: you are a part of Dirt Bikes' management

team and have been asked to analyze data on Dirt Bikes'

financial performance.

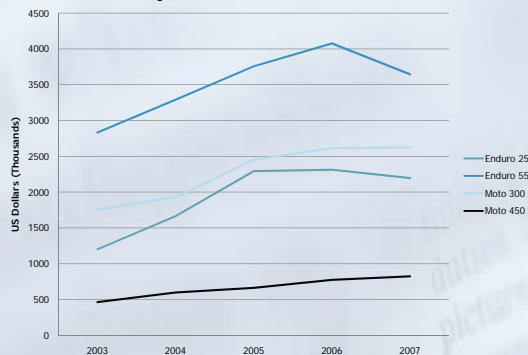
- Prepare an addition to your management report that answers these questions:
  1. What are Dirt Bikes's best- and worst-performing products? What is the proportion of domestic to international sales? Have international sales grown relative to domestic sales?

## Assignment#1

- 2. Are sales(revenues) growing steadily, and, if so, at what rate? What is the cost of goods sold compared to revenues? Is it increasing or decreasing? Are the firm's gross and net margins increasing or decreasing? Are the firm's operating expenses increasing or decreasing? Is the firm heavily in debt? Does it have assets to pay for expenses and to finance the development of new products and information systems?
- 3.(Optional) Use electronic presentation software to summarize your analysis of Dirt Bikes's performance for management.

### Sales by Model Between 2003 and 2007

Sales by Model Between 2003 and 2007



**Remark:**  
Dirt Bikes's best-performing product is Enduro 550; the worse-performing one is Moto 450.

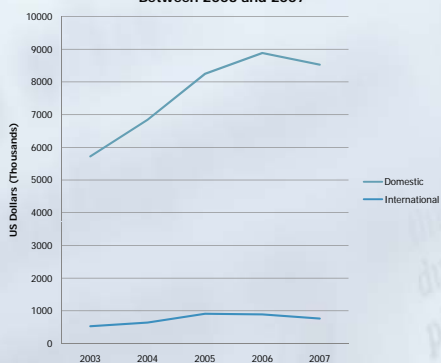
### The Proportion of Domestic to International Sales

	Domestic vs. International Sales				
	2003	2004	2005	2006	2007
Domestic	5723	6843	8254	8889	8530
International	528	640	911	889	762
TOTAL	6251	7483	9165	9778	9292
% International	8.4%	8.6%	9.9%	9.1%	8.2%
% Domestic	91.6%	91.4%	90.1%	90.9%	91.8%
Domestic-International	5195	6203	7343	8000	7768

**Remark:**  
The proportion of domestic to international sales is relatively high on the average of 91.2% from 2003 to 2007.  
Please refer to the attached raw data.

### Comparison of Domestic and International Sales

Domestic v.s. International Sales Between 2003 and 2007



**Remark:**  
1. International sales is far less than Domestic sales between 2003 and 2007.  
2. Both of International and domestic sales grew but international sales didn't rise as much as domestic sales from 2003 to 2005.

### Consolidated Statements of Income (in thousands)

	2005	2006	2007
<b>Revenue</b>			
Net sales	61,529	64,063	60,144
Cost of goods sold	41,072	43,155	45,835
Gross profit/(loss)	20,457	20,908	14,309
<b>Gross margin</b>	<b>33.25%</b>	<b>32.64%</b>	<b>23.79%</b>
<b>Operating expenses</b>			
Sales and marketing	3,944	4,537	4,733
Engineering and product development	2,339	2,992	3,141
General and administrative	1,392	1,601	1,913
Total operating expenses	7,675	9,130	9,787
Operating income/loss	12,782	11,778	4,522
<b>Other income/expense</b>			
Interest income/expense	80	175	1,747
Other income/(expense)	-3,080	-2,914	-6,254
Income before provision for income taxes	9,782	9,039	15
Income taxes	535	1,729	1,459
Net income/(loss)	9,247	7,310	-1,444
<b>Net margin</b>	<b>15.03%</b>	<b>11.41%</b>	<b>-2.40%</b>

**Remark:**

- Sales (revenues) are not growing steadily. It drops from 64,063 to 60,144 in 2007.
- The cost of goods sold has been increasing whereas the net sales drops in 2007.
- The firm's gross and net margins are decreasing.
- The firm's operation expenses are increasing over three years.

## Summary Balance Sheet Data

Summary Balance Sheet Data				Remark:
At December 31	2005	2006	2007	
<b>Current assets</b>				1.The firm is not heavily in debt since the total assets are much more than total liabilities.
Cash and cash equivalents	6,891	7,197	6,994	
Accounts receivable	12,872	12,981	13,083	2.The firm has assets to pay for expenses and to finance the development of new products and information systems since total current assets are much more than total current liabilities.
Inventories	5,843	5,931	6,316	
<b>Total current assets</b>	<b>25,606</b>	<b>26,109</b>	<b>26,392</b>	
<b>Property plant, and equipment</b>	<b>32,002</b>	<b>34,515</b>	<b>36,920</b>	
Other assets	1,834	1,903	1,765	
<b>Total assets</b>	<b>59,442</b>	<b>62,527</b>	<b>65,077</b>	
<b>Current liabilities</b>				
Accounts payable	7,592	8,694	8,943	
Accrued expenses and other liabilities	8,654	9,382	10,877	
<b>Total current liabilities</b>	<b>16,246</b>	<b>18,076</b>	<b>19,820</b>	
Long-term debt	8,890	9,338	9,772	
<b>Total liabilities</b>	<b>25,136</b>	<b>27,414</b>	<b>29,592</b>	
Shareholders' equity	34,306	35,113	35,485	
<b>Total liabilities + shareholders' equity</b>	<b>59,442</b>	<b>62,527</b>	<b>65,077</b>	

## Summary of Analysis

- The charts above indicates Dirt Bikes's weakness for international sales and leaves the room for improvement.
- Net income has decreased to be - US\$1,444,000 in 2007 and give the management teams an alert for some change.
- Dirt Bikes still has the working capital to invest in new products and information systems for more profit.

## Assignment#2

- **Task Description:**
  - **Role Definition:** a company that manufactures aircraft components
  - **Objective:** use some criteria to identify preferred suppliers to benefit from better supply chain management
- **Assignment:**

Use your spreadsheet software to prepare reports to support your recommendations.

## Recommendations for Preferred Suppliers

- **Method:**
  - 1<sup>st</sup> Step: Categorize the parts
  - 2<sup>nd</sup> Step: compare the suppliers with the best offer for each part such as the price, the shortest Lead time and so on. Then find the preferred one.

## Recommendations For Preferred Suppliers

### Example

	A	B	C	D	E	F	G	H	I	L
1	Vendor Name	Vendor No.	Order No.	Item No.	Item Description	Item Cost	Quantit	Cost per order	A/P Term	LT
2	Durable Products	3	A1344	5454	Control Panel	\$ 220.00	550	\$ 121,000.00	45	5
3	Durable Products	3	A1456	5454	Control Panel	\$ 220.00	500	\$ 110,000.00	45	5
4	Manley Valve	5	A0433	5417	Control Panel	\$ 255.00	500	\$ 127,500.00	30	7
5	Manley Valve	5	A0446	5417	Control Panel	\$ 255.00	406	\$ 103,530.00	30	9

#### Remark:

Concerning control panel, Durable Products is the most preferred supplier due to the better item cost, A/P term and lead time compared to the other supplier.

(For more details, please refer to the attached excel file)

## Assignment #3

### Task Description:

- Role Definition: a dispatcher for Cross-Country Transport, a new trucking and delivery service.
- Objective: plan the most efficient route between Elkhart and Hagerstown in U.S.A.

### Assignment:

- Find the shortest route by using MapQuest
- Find the route that takes the least time
- Compare the results. Which route should Cross-Country use?

## Find the shortest route

Key in the address information

## Find the shortest route

Total Estimated Time: 8 hours 51 minutes  
Total Estimated Distance: 533.54 miles  
Total Estimated Fuel Cost: Fuel Cost

### Find the shortest route

▼ Directions from A to B:

1: Start out going NORTH on PRAIRIE ST/COUNTY ROAD 9 toward WAGNER AVE. Continue to follow COUNTY ROAD 9.	2.1 mi	Map
2: Turn LEFT onto E BRISTOL ST.	0.3 mi	Map   Avoid
3: Turn RIGHT onto CASSOPOLIS ST/IN-19.	2.2 mi	Map   Avoid
4: Take the I-90-I-80 ramp toward TOLL ROAD.	0.3 mi	Map   Avoid
5: Merge onto I-80 E toward OHIO (Portions toll) (Crossing into OHIO).	283.3 mi	Map   Avoid
6: Keep LEFT to take I-76 E/PENNSYLVANIA TURNPIKE toward PITTSBURGH (Portions toll) (Crossing into PENNSYLVANIA).	184.6 mi	Map   Avoid
7: Merge onto I-70 E via EXIT 161 toward US-30/BREEZEWOOD/BALTIMORE (Portions toll).	2.2 mi	Map   Avoid
8: Take the US-30 W exit.	0.1 mi	Map   Avoid
9: Turn SLIGHT RIGHT onto I-70/US-30/LINCOLN HWY.	0.3 mi	Map   Avoid
10: Turn LEFT onto I-70 E (Crossing into MARYLAND).	48.0 mi	Map   Avoid
11: Take the I-81 N exit, EXIT 26, toward HAGERSTOWN/HARRISBURG.	0.4 mi	Map   Avoid
12: Merge onto I-81 N via EXIT 26B toward HARRISBURG.	6.0 mi	Map   Avoid
13: Take the MAUGANIS AVENUE exit, EXIT 9.	0.1 mi	Map   Avoid
14: Take the ramp toward US-11.	0.0 mi	Map   Avoid
15: Turn SLIGHT RIGHT onto MAUGANIS AVE.	0.6 mi	Map   Avoid
16: Turn RIGHT onto PENNSYLVANIA AVE/US-11.	1.1 mi	Map   Avoid
17: Turn LEFT onto NORTHERN AVE.	1.1 mi	Map   Avoid

### Find the shortest route

### Find the route that takes the least time

Driving Directions from E Indiana Ave & Prairie St

[Print](#) [Save](#) [Send To](#) [Link to This Page](http://www.mapquest.com/)

**E Indiana Ave & Prairie St**  
 Elkhart, IN 46516  
[Search Nearby](#) [Zoom to Street](#) [Send to Cell](#) [Send to OnStar](#)  
[See Local Events, Movies, News & More](#)

**Eastern Blvd N & Potomac Ave**  
 Hagerstown, MD 21742  
[Search Nearby](#) [Zoom to Street](#) [Send to Cell](#) [Send to OnStar](#)  
[See Local Events, Movies, News & More](#)

Total Estimated Time: 9 hours 45 minutes  
 Total Estimated Distance: 508.62 miles  
 Total Estimated Fuel Cost: [Fuel Cost](#)

**Directions Options**  
[Hide Directions](#)  
[Reverse Directions](#)

**Avoid:**  
 Highways  
 Toll Roads  
 Seasonally Closed Roads

**Show Directions By:**  
 Shortest Time  
 Shortest Distance

[Update Directions](#)

### Find the route that takes the least time

▼ Directions from A to B:

1: Start out going EAST on E INDIANA AVE toward KINZEY ST.	1.4 mi	Map
2: E INDIANA AVE becomes TOLEDO RD/ OLD US 20.	2.4 mi	Map   Avoid
3: Merge onto US-20 E toward ANGOLA.	48.4 mi	Map   Avoid
4: Enter med roundabout and take 2nd exit onto US-20 (Crossing into OHIO).	12.2 mi	Map   Avoid
5: Turn RIGHT onto OH-49.	0.4 mi	Map   Avoid
6: Merge onto I-80 E via the ramp on the LEFT (Portions toll).	215.9 mi	Map   Avoid
7: Keep LEFT to take I-76 E/PENNSYLVANIA TURNPIKE toward PITTSBURGH (Portions toll) (Crossing into PENNSYLVANIA).	90.3 mi	Map   Avoid
8: Merge onto US-30 E via EXIT 67 toward GREENSBURG.	80.9 mi	Map   Avoid
9: Take the US-30 BUSINESS ramp toward PA-29 S/ EVERETT.	0.2 mi	Map   Avoid
10: Stay STRAIGHT to go onto W MAIN ST/ US-30 BR E.	2.0 mi	Map   Avoid
11: Stay STRAIGHT to go onto US-30 E/LINCOLN HWY.	23.3 mi	Map   Avoid
12: Turn LEFT onto PA-1004.	0.0 mi	Map   Avoid
13: Turn RIGHT onto LINCOLN WAY W.	2.5 mi	Map   Avoid
14: Turn SLIGHT RIGHT onto PA-16/ BUCHANAN TRL W.	9.9 mi	Map   Avoid
15: Turn SLIGHT LEFT onto S MAIN ST/ BUCHANAN TRL W/ PA-16/ PA-416/ PA-75. Continue to follow BUCHANAN TRL W/ PA-16/ PA-416.	2.2 mi	Map   Avoid
16: Turn RIGHT onto MERCERSBURG RD/ PA-416 (Crossing into MARYLAND).	7.4 mi	Map   Avoid
17: MERCERSBURG RD/ PA-416 becomes CLEARFOSS PIKE.	2.1 mi	Map   Avoid
18: Enter med roundabout and take 2nd exit onto CLEARFOSS PIKE/ MD-56.	0.9 mi	Map   Avoid
19: Turn LEFT onto GARDEN VIEW RD.	1.1 mi	Map   Avoid
20: Turn LEFT onto MAUGANISVILLE RD.	0.2 mi	Map   Avoid

## Find the route that takes the least time



## Compare The Results

- Comparison

Route	Distance	Time
The shortest distance	506.52 miles (-27.02 miles)	9 hours 45 minutes
The shortest time	533.54 miles	8 hours 51 minutes (-54 minutes)

- Which route should Cross-Country use?  
It depends on the package number, package route on that day, and company policy about whether time or cost is the priority.

## SUMMARY

## Opportunities

- Achieve higher levels of productivity, earnings, and ultimately advance share prices.
- Enhance decision making of both managers and employees
- Providing information where and when it is needed in a format that is easily integrated into everyday business life.

## Management Challenges

- Integration and the whole firm view
- Management and employee Training
- Accounting for the cost and systems and managing demand for systems

## Solution Guidelines

- Inventorying the firm's information systems for a 360-degree view of information
- Employee and management education
- Accounting for the costs and benefits of information systems

### CASE STUDY-JAPAN - TOYOTA moving forward

<http://www.toyota.com/>

 TOYOTA moving forward CARS TRUCKS SUVs & VAN HYBRIDS BUILD YOUR TOYOTA FIND A DEALER Search




**THE 2009 COROLLA**

What's New!

DriverSeeker TV Spot   3rd Generation Prius   Shop Local Specials

▲ SHOPPING TOOLS ▲ FOR OWNERS ▲ TOYOTA CERTIFIED USED ▲ TOYOTA RACING ▲ ABOUT THE COMPANY Español 中文 Help

### CARS INFOR

 TOYOTA moving forward **CARS** TRUCKS SUVs & VAN HYBRIDS BUILD YOUR TOYOTA FIND A DEALER Search

View All Vehicles	YARIS	COROLLA	MATRIX	CAMRY	CAMRY SOLARA	PRIUS	VENZA	AVALON
Upcoming Vehicles	\$12,285 starting <sup>1</sup>	\$15,358 starting <sup>1</sup>	\$16,298 starting <sup>1</sup>	\$19,145 starting <sup>1</sup>	\$24,189 starting <sup>1</sup>	\$22,884 starting <sup>1</sup>	\$25,975 starting <sup>1</sup>	\$27,445 starting <sup>1</sup>
Concept Vehicles	23.36 est. mpg <sup>2</sup>	26.33 est. mpg <sup>2</sup>	26.32 est. mpg <sup>2</sup>	21.31 est. mpg <sup>2</sup>	21.31 est. mpg <sup>2</sup>	48-45 est. mpg <sup>2</sup>	21.29 est. mpg <sup>2</sup>	19.28 est. mpg <sup>2</sup>



What's New!

DriverSeeker TV Spot   3rd Generation Prius   Shop Local Specials

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## Attractiveness

**TOYOTA** moving forward

- Toyota website is one which reflects on the strong principles and good quality
  - good-looking
  - structured homepage
    - The main colour: white and a light shade of gray, greens and blues in bright shades
    - cartoon-character popping banner
- The flash banners incorporated onto the homepage give the Toyota website a fun and youthful appeal.

## Improvement

- The search engine optimization is however not enough if the Toyota company wishes to take full advantage of the marketing and promotion properties of their website.
  - more keywords be placed in the meta tags and web contents.
  - through Website Design and Marketing company

## Q & A

